BONNEVILLE
POWER ADMINISTRATION

Human Capital Plan FY05-09

Bonneville Power Administration
June 2005

BPA Human Capital Workforce Plan, FY05-FY09

Section I: Introduction

This BPA workforce plan provides an overview of the agency's workforce needs with regard to its overall workforce size and its critical skills through fiscal year 2009. BPA's role in the region has a long, well-established history, but it continues to evolve. Furthermore, changes continue to occur in other factors such as technology developments and advances in different professional disciplines. These changes will drive the workforce needs over the next four years, and this plan attempts to reflect those factors through the time period when BPA's new power rates will be effective. BPA's mission and strategy will drive its workforce needs, as reflected in Figure 1 below:

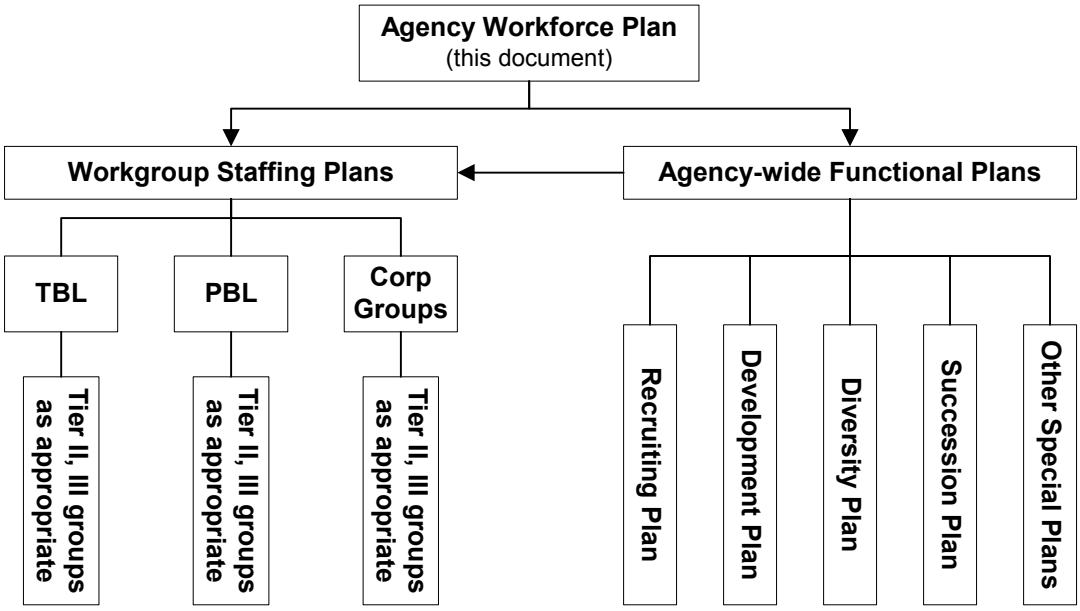
Figure 1

There are a number of workforce planning guides available, and several have been consulted in the development of this workforce plan.[1] While there are some differences in approach, typically they encompass these four steps: 1) strategic workforce analysis; 2) workforce action planning; 3) action plan implementation; and 4) monitoring, evaluation and revision. This plan only covers the first of those steps, and will identify the gaps that are anticipated in both FTE levels and critical skills needed to fulfill the agency's strategy through FY09.

The other steps will be included in more detailed plans related to specific aspects of workforce planning needs, as depicted in Figure 2 on the following page. The agency-wide plans on the right-hand side of the graph will reflect elements of the gap closure initiatives, focusing on the hiring and development needs of the agency over the next several years. The separate workgroup staffing plans noted on the left-hand side will develop much more specific information about the organization's staffing needs down to the individual position level, and they will reflect a detailed assessment of position management and unique skill needs for each workgroup.

[1] In the federal sector, both the Department of Energy and the Office of Personnel Management have workforce planning guides: U.S. DOE, "Workforce & Succession Planning/Management: A Corporate Approach Within the Department of Energy and National Nuclear Security Administration," December 2004; U.S. Office of Personnel Management, "Workforce Planning Model," downloaded from http://www.opm.gov/workforceplanning/wfpmodel.htm. Other studies consulted have included: Corporate Leadership Council, "Workforce Planning in the Federal Government," Corporate Executive Board, February 2003; Corporate Leadership Council, "Managing the Workforce Planning Process," Corporate Executive Board, August 2004; Bledsoe, Ralph, et.al., "Building Successful Organizations: A Guide to Strategic Workforce Planning," National Academy of Public Administration, Center for Human Resources Management, Washington, D.C., May 2000.

Figure 2



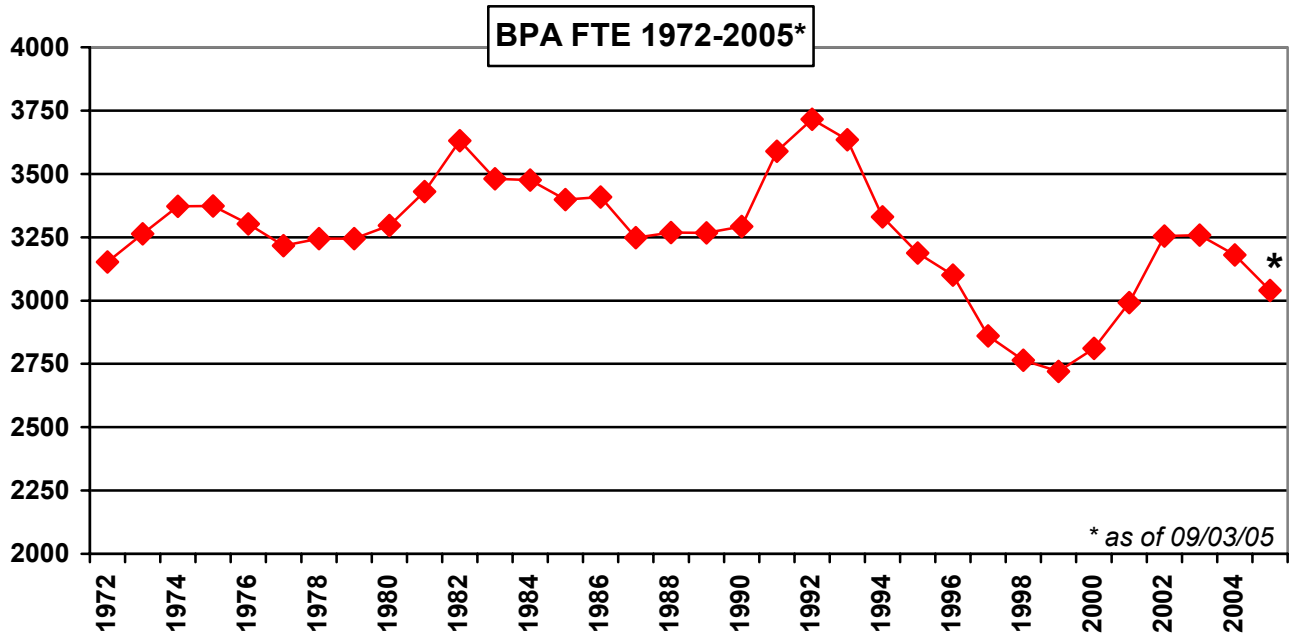
This agency workforce plan provides overall FTE guidance for the Transmission Business Line, Power Business Line and Corporate through FY09 for use in budgeting, and it will inform the more detailed plans identified in Figure 2 above. It will also be used for reporting to DOE on BPA's skills gap closure initiatives. The more detailed, special-purpose workforce plans are expected to be finished by the end of calendar year 2005, after the Enterprise Process improvement Project (EPIP) efficiency studies and other analyses are available. Those plans, in turn, are expected to inform another agency-wide workforce plan update that would go through FY 2011, to be completed a year from now.

Section 2: Background — Overall BFTE Picture

The following graph details BPA's FTE history since 1972. As is evident, BPA has experienced a relatively stable level of FTE when viewed from a long-term perspective, though there have been variations of about 15 percent above and below the average level of roughly 3,250 Bonneville FTE over this timeframe. The significant 30 percent decline between 1992 and 1999 was driven by the so-called "Competitiveness Project" and by the reduced regional role envisioned for BPA as outlined by the Regional Review published in 1996. The increase from 1999 to 2002 was in response to the greatly increased transmission line construction program, by the increased load placed on BPA, and by the greater complexity of the wholesale power market. The decline since that time was driven by the need to reduce costs and capture efficiencies following the West Coast energy crisis in 2000-2001 and the consequent rate increases that BPA needed to implement.[2] Current FY05 FTE levels are expected to be about 3,080.

[2] This information relates to Bonneville FTE. Virtually throughout BPA's history, its workforce has been supplemented by "contractor" FTE, but two problems have plagued the tracking of the count of contractor FTE. First, it is often difficult to even define what is meant by a contractor FTE, since supplemental work varies so much. It ranges widely, from perhaps an independent worker who works completely off-site and might only occasionally receive an assignment, to a large firm that has a turn-key contract to build a large transmission line. Since 1994, BPA has been trying to track contractor FTE using a narrow definition of workers who do work virtually full-time on-site which could be performed by a BPA employee. Using this definition, as of June 2005, BPA has roughly 460 contractor employees, though some of them are working less than full-time and therefore this number does not translate directly to FTE. Typically, Bonneville's contractor workforce has moved up and down in direct proportion to Bonneville FTE.

Figure 3



The key point is that BPA's strategic direction has been the primary driver behind BFTE changes over the years, and the challenge of this particular workforce plan is to understand how the agency's future strategic direction will affect its needs with regard to both the workforce size and its needed skill mix. BPA's core mission is to solve the problems that are part of delivering on the four "pillars" of its mission: low rates, system reliability, environmental stewardship, and regional accountability. It is only the knowledge, competency, insight and creativity of its employees that help met those goals, and therefore, BPA's workforce is its most strategic asset.

Section 3: FTE Analysis

This section assesses BPA's FTE needs over the next four years. First, it determines how many current BPA employees will likely be leaving during that timeframe from all causes. Then, it analyzes the expected workload changes driven by BPA's strategy through FY09 and translates that into a range of FTE levels needed to perform that work. There is naturally some uncertainty about the factors that drive this analysis, so there is a range around the numbers to reflect that uncertainty.

a. Projection of FTE Losses

In order to understand our hiring needs over the next four years, we first need to project the amount of turnover of existing staff from FY05 through FY09. These losses are forecasts based on the historical pattern of BPA turnover from FY00 through FY04 due to retirements and for reasons other than retirement (OTR), a broad category which includes resignations, transfers out to other Federal agencies, involuntary separations, terminations of temporary appointments and deaths. This historical data is then applied to the demographic profile of the existing workforce to project both retirements and all separations for reasons other than retirement.

Table 1

Historical BPA Attrition Data, FY00-FY04

	FY98	FY99	FY00	FY01	FY02	FY03	FY04
Number of retirements	135	114	81	66	60	129	94
Separations (other than retirement)	120	108	118	125	107	88	77
Total number of BPA departures	**255**	**222**	**199**	**191**	**167**	**217**	**171**

	FY98	FY99	FY00	FY01	FY02	FY03	FY04
Average # of years between optional retirement eligibility and actual retirement	NA	NA	2.0	2.5	2.2	2.6	2.7
Average Age at retirement	NA	NA	59.0	60.2	59.8	60.2	59.6
Average Years of service at retirement	NA	NA	30.1	30.1	30.5	30.3	31.5

A review of this attrition data in Table 1 shows that, on average, almost 200 employees leave BPA for one reason or another each year. BPA employees have retired on average approximately 2.5 years beyond their optional retirement eligibility date and retire at an average age of 59.8. This is very close to the pattern of retirements for the Federal government as a whole, where in 2004 the average age at retirement was 60.6, the average length of service was 27.6 years and workers had been eligible to retire for an average of 3 years before actual retirement. The only discernible trend would seem to be in the length of time between the first date of optional retirement eligibility and when people choose to retire, which is increasing over time. This BPA pattern is corroborated by national workforce statistics, which have also indicated an increase in the average age of retirement during the last four years, following decades when the average retirement age had been declining.[3]

Figures 4 and 5 show the age demographic profile of BPA's current workforce, and the number of people who become eligible for retirement over the next four years.

[3] Purcell, Patrick J., "Older Workers: Employment and Retirement Trends," Journal of Pension Planning and Compliance, Vol. 30, No. 4 (Winter 2005), pp. 49-70.

Figure 4

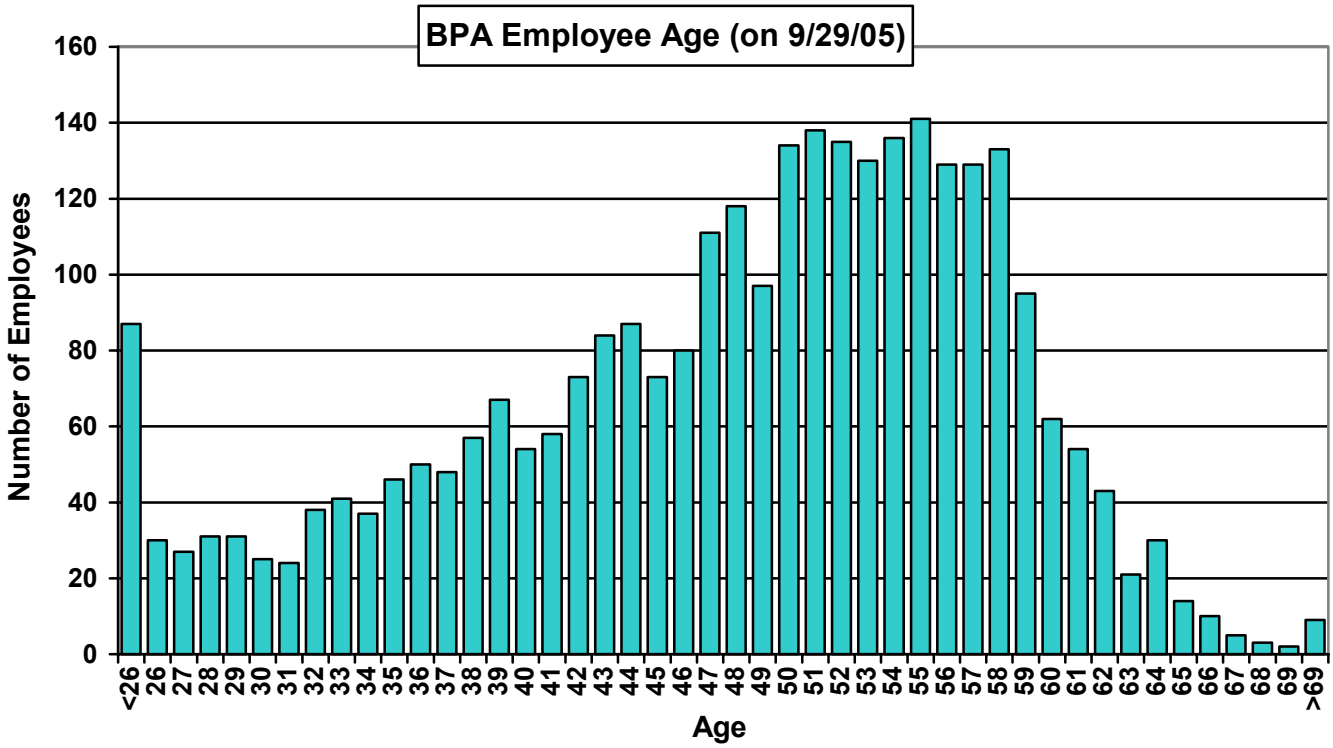
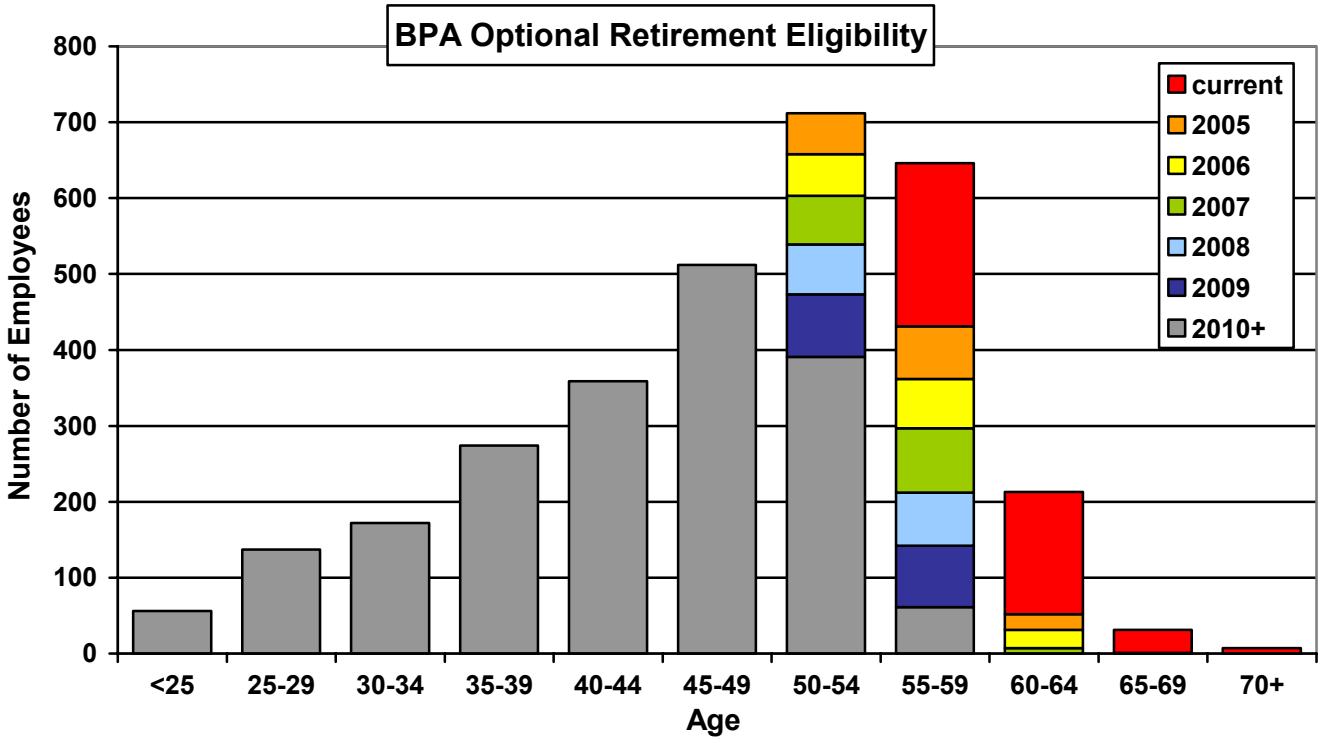
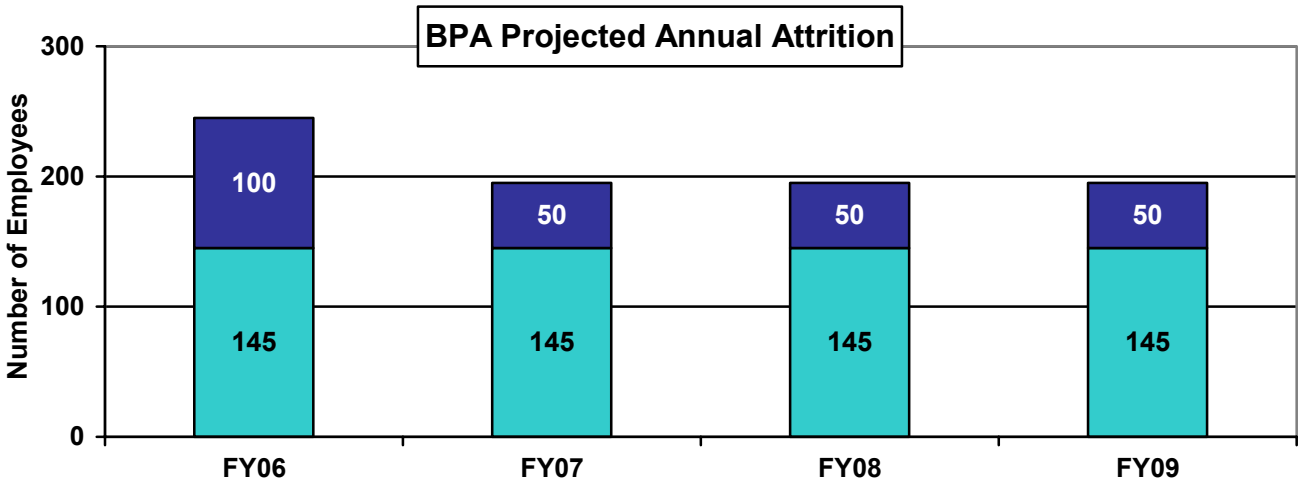


Figure 5



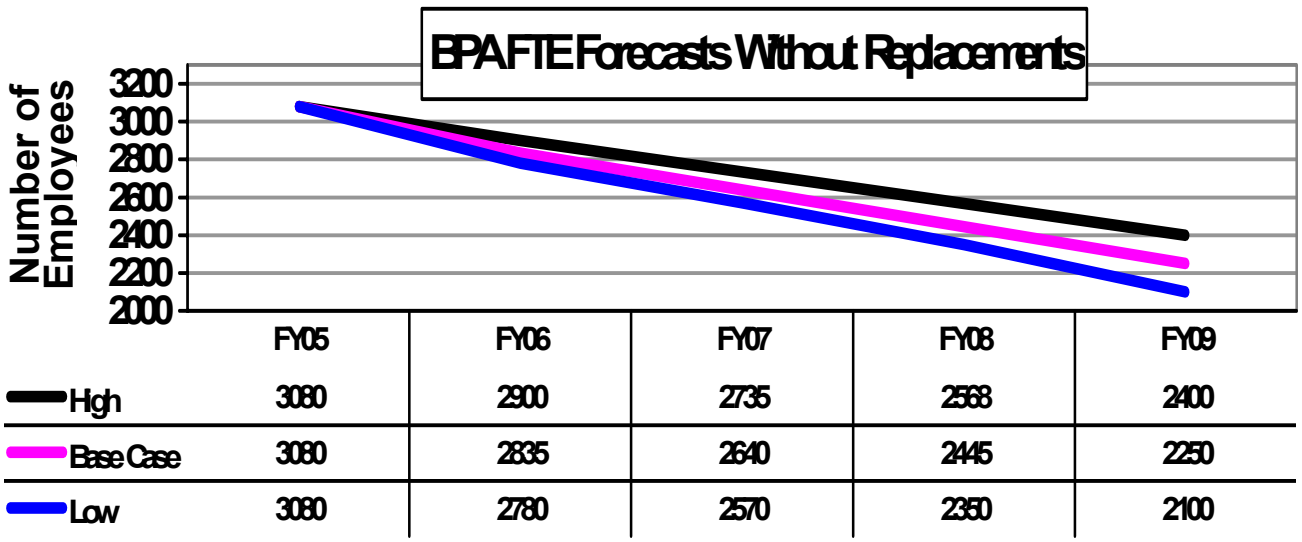
Our projection of losses through retirements for the period after FY05 reflects this average three-year lag, and in this forecast we assume that people who reach three years of additional service beyond their first date of optional retirement eligibility will actually choose to retire. Over the next four years, almost 600 employees will meet that test and would be expected to retire, and we have leveled that out to 145 per year. The FY00 through FY04 data shows that other BPA OTR separations (i.e., resignations, terminations, deaths, transfers out, etc.) average approximately 100 personnel per year. Of these 100 personnel, approximately 50 per year are releases of temporary staff, which are all assumed to leave BPA employment by the end of FY06 due to the nature of most of their employment agreements. Therefore, projections due to OTR separations are estimated at 100 for FY06, and 50 per year beyond that time. Total workforce losses for each of the years FY06 through FY09 are contained in Figure 6. The attrition total for the four years is expected to be roughly 850, or about 28 percent of BPA's current workforce.

Figure 6



There are several significant uncertainties around these estimates. The assumption that people will, on average, stay three years beyond their first date of retirement eligibility could be either too high or too low. The historical rate has been lower than three years, though it has been steadily rising. As noted above, the Federal average is three years. In addition, the state of the economy has had a significant effect on BPA's turnover rate due both to retirements and separations. As the economy (as reflected by either the stock market or the labor market) turns down, people have tended to retain their BPA jobs and stay longer; the opposite has also proved true. Another uncertainty is simply the work environment at BPA: a positive work environment will lead to higher rates of retention, while a poor work environment will lead to greater attrition. These uncertainties lead us to estimate a reasonable bandwidth around this forecast of attrition through FY09 to be plus or minus 150. Therefore, the total range of estimated turnover for the four years is from 700 to 1,000, with a best estimate of about 850. The resulting forecast of FTE *without any replacements* is therefore reflected in Figure 7, starting from an estimated 3,080 FTE base in FY05.

Figure 7



	FY05	FY06	FY07	FY08	FY09
High	3080	2900	2735	2568	2400
Base Case	3080	2835	2640	2445	2250
Low	3080	2780	2570	2350	2100

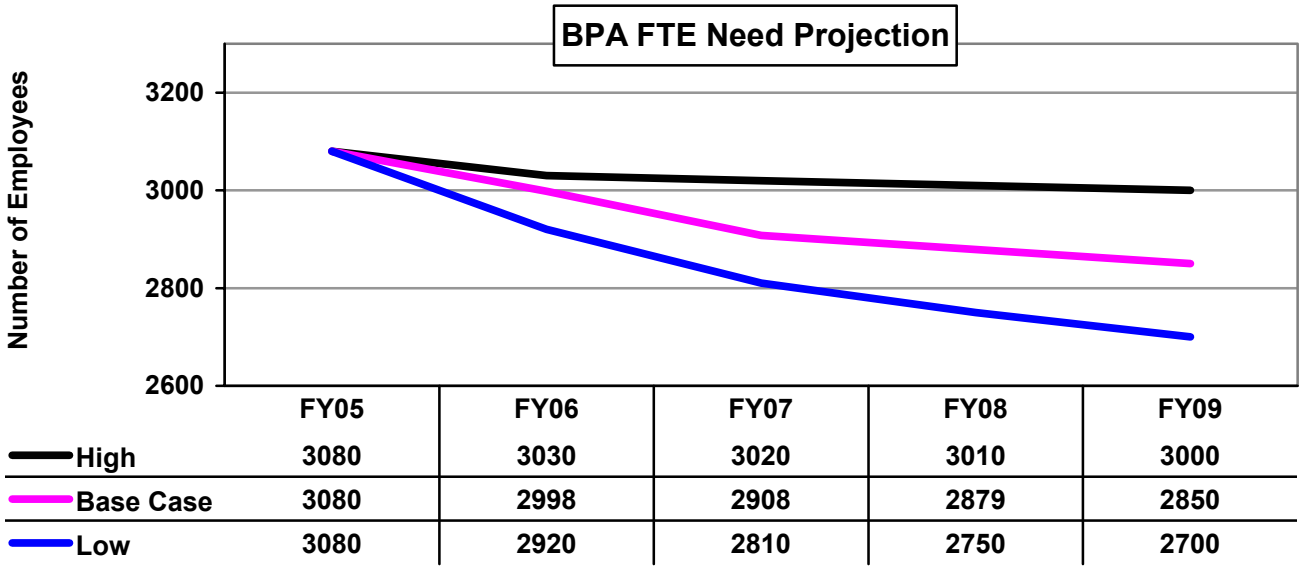
b. Projected FTE Needs

Following the strategy of projecting FTE needs based on Figure 1, we began by attempting to translate BPA's business strategy and output needs into workforce needs. BPA's strategic direction has been documented in its mission and vision statements, its agency and workgroup strategy maps and balanced scorecards, expense projections and business plans such as the Power Function Review and the Transmission Infrastructure Program, and in budgets and other formal communications to the Department of Energy and Congress. In addition, a number of current efforts are underway that are expected to significantly affect BPA's FTE needs. These include the six current Enterprise Process Improvement Project (EPIP) studies which are identifying process efficiencies; the Asset Management project; the examination of Grid West and the Transmission Improvements Group alternatives; the Regional Dialogue to determine BPA's long-term power supply role and a wider variety of other developments. Based on what is largely known now, Figure 8 projects Bonneville FTE expected needs through FY09, which in the base case are expected to be about 2,850, a level of roughly 270 lower than FY05. (More detailed projections of FTE needs by occupation and skill levels will be contained in the detailed workgroup staffing plans described in Figure 2, which are expected to be completed by the end of calendar year 2005).

Again, there are significant uncertainties that could drive the projected FTE needs either higher or lower. For example, additional EPIP studies might identify additional savings opportunities, or new technologies could increase employee productivity. However, changing developments could also increase BPA's workload demands and consequent FTE needs. For example, BPA may need to manage a greatly different residential exchange program than currently envisioned, or a different fish and wildlife program, or a different energy efficiency program. The timing and workload demands associated with transitioning the Northwest transmission system to a different management and governance structure are still largely unknown. Each of the EPIP studies already finished depend in some degree on a number of assumptions about technology, roles or other factors that could affect their success. Finally, the Federal government may choose to impose additional requirements on BPA that could either increase or decrease the agency's FTE needs. To accommodate all these uncertainties, it is

reasonable to assume that there is a range of uncertainty of plus or minus 150 around the 2850 projected for FY09. These higher and lower ranges are also reflected in Figure 8.

Figure 8



	FY05	FY06	FY07	FY08	FY09
High	3080	3030	3020	3010	3000
Base Case	3080	2998	2908	2879	2850
Low	3080	2920	2810	2750	2700

The allocation of the base case FTE are distributed among the three major organizational groups within BPA according to the following Table 2:

Table 2

BPA FTE Allocation by Major Workgroup, FY05-FY09

	FY05	FY06	FY07	FY08	FY09
Corporate Organizations	797	794	765	739	714
Power Organization	389	377	375	374	372
Transmission Organization	1898	1827	1768	1766	1764
Total	**3084**	**2998**	**2908**	**2879**	**2850**

The conclusion of this FTE analysis suggests that, while overall BPA FTE levels will be gradually decreasing by a base case estimate of 270 from FY05 through FY09, expected attrition will cause BPA's workforce to decline by about 830 during the same timeframe. Thus, BPA will need to hire almost 600 people over the next four years in order to meet its (declining) workforce demands.

Section Four: Skill Mix Analysis

Projecting total workforce needs provides only the most aggregate of indicators of what talent is required to meet BPA's mission. The next step is to assess what skills, knowledge, experience or competencies that workforce should have in order to perform that work most

effectively. This section provides a high-level analysis of the skill needs and what will be required in terms of recruiting new staff or developing existing staff to fill those needs.

In January of this year, DOE requested that BPA provide a list of mission critical skills and the approximate number of people needed in each of those skill areas. There is always some controversy around what might be identified as a "mission critical" skill. Every job is important and contributes in some way to BPA's success, but this effort forced us to draw the line somewhere to distinguish those skills that are deemed "mission critical" from those that have less immediate or direct impact on BPA's mission success. The analysis was based on previous work conducted by HR staff in FY03, PBL Skill Tracker results, Lessons Learned and KEMA reports, and shortage occupations information. The list submitted reflected the following broad skill areas:

1. Management and Leadership
2. Contract Management Certification
3. IT Project Management Certification
4. Business Acumen and Risk Management
5. Electric Utility and Public Policy Analysis
6. High Voltage Electric Utility Power and Transmission Scheduling
7. Substation Operations
8. Transmission System Electrical Electronic Systems Engineering
9. High Voltage Transmission Electrician
10. High Voltage Transmission Lineman
11. Accounting and Financial Management

A 12th critical skill of Contract Development and Administration was subsequently added, as it reflects a need across the whole agency as has been identified by the Administrator as a high-risk skill area.

This list is a good cross section of those technical and non-technical areas that represent the skills BPA is currently most in need of developing and enhancing. The next task was to identify any "skill gaps" between the current levels we have in the existing workforce occupying those positions and those needed to successfully perform BPA's mission. An action plan will identify the training and development steps needed to close the skill gaps within the current workforce. These elements are part of BPA's Human Capital Quarterly Report submitted each three months to DOE.

This analysis, however, provides only a static picture of the skill gaps that may exist in the current workforce. Over time, this analysis needs to reflect the dynamic changes that will exacerbate any current skill gaps: either the job needs could change because of such things as technology improvements or changes in the professional knowledge base, or attrition in the workforce will create new skill gaps needing to be filled by outside hires.

The identification of the current and forecast critical skill gaps was done by working with each major BPA organization (Transmission, Power and Corporate) to identify the current skills they have today, and then to project the number of people needing those skills that will be required in FY09.

There is a challenge in assessing whether incumbents in these critical skill positions currently have the requisite skills in those areas. The presumption behind the concept is that people either have or do not have the needed skills, implying that there is a "bright line" that distinguishes the difference. In some critical skill areas, clear standards do exist that can be used to make this determination. For example, to work in the field of substation operations, one must have completed a three and one-half year apprenticeship program and passed examinations that qualify graduates to fill these kinds of jobs. But some skill areas don't have such rigorously-defined standards that can be used to state whether one has or doesn't have the required skills to be successful. An example is the area of business acumen and risk management. In those areas, we intend to eventually base our assessments on the evaluations done through the PeopleSoft HRMIS "Competency Module". Since those assessments won't be complete for some time, we have needed to rely on expert judgment to develop estimates of current skill levels within the limits of a process that suggests that people either "have" or "don't have" the needed skills, when in practice there is a continuum of skill levels.

In some occupations, a direct crosswalk of established job series to critical skill categories is possible. This crosswalk was done for the following critical skills:

Table 3

Definitions of Critical Skill Areas

Critical Skill Area	Job Series Crosswalk	Comments
Management and Leadership	All jobs coded as supervisor or manager	No clear standard exists to reflect "having" the skill set. A current skill gap of 10% was estimated based on employee survey feedback plus the number of supervisors who are very new to their jobs.
Contract Management certification	Certified Contracting Officers within the 1102 and 1105 series	BPA has established a curriculum which must be completed to receive certification; this closely parallels the DOE Acquisition Career Development Program for CO Certification.
IT Project Management Certification	Primarily, certain persons within the 2210 and 1101 job series who require IT project certification	Project management courses must be completed to receive certification
Business acumen and risk management	No rigid connection with particular job series; dependent upon the duties of particular positions	Assessed through the use of the Competency Module in BES
Electric utility and public policy	Certain individuals within the 0028, 0110, 301, 340, 343, 510, 801/810/830/850, 802, 1101, 1130 1160, 1301 job series known to be performing electric utility and public policy analysis in both the PBL and TBL.	Current skills assessed through the use of the Competency Module in BES (or its predecessor, "Skill Tracker" in the PBL)
High Voltage Electric Utility & Transmission Scheduling	1130 series (titles that include "scheduler") and 1301 series (titles that include "physical scientist (power operations)"	No current skill gaps identified; each individual doing these jobs is certified as qualified.
Substation Operations	1601 series (titles that include "substation operations") and 5407 (titles that include "substation operator")	No current skill gaps identified; each individual doing these jobs is certified as qualified.
Trans. System Electrical & Electronic Systems Engineering	All in the 0850 and 0855 job series	Engineering degree required to fill each of these jobs.
High Voltage Transmission Electrician	2810 series (titles that include "electrician")	No current skill gaps identified; each individual doing these jobs is certified as qualified.
High Voltage Transmission Lineman	2810 series (titles that include "line")	No current skill gaps identified; each individual doing these jobs is certified as qualified.
Accounting & Financial Mgmt	0510, 0511, 0501 series (titles that include "financial")	Current skill gaps are only preliminarily identified.

Table 4 presents an agency picture of the critical skill gaps we currently have in FY05, plus a projection of our needs in these critical skill areas in FY09, based upon an assessment of workload and strategic needs. The assessment of how many people will "have" those skills in FY09 is a quite simplistic projection, based solely on the number of people who might choose to retire using the assumption that on average people leave within three years of their first date of optional retirement eligibility. We know that this results in an overstatement of projected skill levels in each area in FY09, because (1) there will be some separations not connected to

retirements, and (2) some attrition will occur in certain occupations because of movement to another job area within BPA. The prime example of this is when people with technical skills move into supervisory or management positions, but it can happen in many other cases as well (e.g., a lineman moves into a position in the Safety Office).

The critical skills we need today compared to the skills we need in FY09 are very similar. Most skill areas are expected to have slight declines in close proportion to the reduction in FTE expected over this timeframe. An exception is in the area of IT project certification, where more people with that certified knowledge base will be needed by FY09.

Table 4

BPA's Critical Skills Needs for FY05 & FY09

Critical Occupations	FY05 Staffing List	FY05 That Have the skill	FY09 Requirements	FY09 Projection (# that have the skill after retirements)
Management & Leadership	350	315	332	200
Contract Mgmt Cert.	51	51	50	27
IT Project Cert.	37	37	50	16
Business Acumen & Risk Mgmt	741	660	700	500
Electric Utility Policy & Public Policy	484	484	474	325
High Voltage Electric Utility & Transmission Scheduling	142	142	139	97
Substation Operations	192	192	185	113
Trans. System Electrical & Electronic Systems Engineering	405	405	400	227
High Voltage Transmission Electrician	241	241	218	132
High Voltage Transmission Lineman	125	125	105	79
Accounting & Financial Mgmt	202	120	140	117
Total	2970	2772	2793	1833

Table 4 reveals that we have skill gaps in three areas, though we need to do a more rigorous analysis using the Competency Module to confirm these numbers. But by FY09, without positive action in developing existing employees or recruiting new employees, we expect skill gaps in all areas due to anticipated retirements. Because we know the attrition rate projected in this table to reflect an underestimate of the actual amount of turnover in each skill area, the need for development and recruitment is actually larger than the table implies.

The numbers reflected in Table 4 relate to skills, not FTE. The difference in skills needed in FY09 versus the (inflated) number expected to have those skills is 930 (2,793 minus 1,833). Since the previous section identified the need to hire 600 people over the next four years, the obvious conclusion is that BPA needs to develop and hire people with multiple skills, rather

than focus on the separate skill areas when developing or hiring our needed talent. We need people who are able to pick up new skills and adapt to changing needs as circumstances dictate. While each employee needs to possess a core of technical skills they can bring to their work, another valuable capability that will be increasingly important to BPA's success will be the ability to learn and apply new skills quickly.

Section Five: Next Steps

Figure 2 above illustrated the parts of a complete and integrated workforce plan. This analysis provides only the first step in this process, identifying agency-level FTE needs and skill needs projected over the next four years. By projecting the retirements and separations expected over that timeframe, we can determine the hiring needs and skill gap closure needs during the next four years. The next steps are to conduct a set of more detailed analyses of the workforce needs by individual workgroup. This will allow a more fine-tuned determination of FTE and skill needs by organization and by more detailed occupation series and skill sets. We anticipate conducting these workgroup staffing plans by the end of calendar year 2005. However, there will likely be particular workgroups that may need to have updated staffing plans delayed until additional EPIP or other process improvements become more clearly understood. So the TBL, PBL and Corporate staffing plans will cover those areas where reasonable projections can be made, but may have "holes" in them in particular topics where significant uncertainties still remain.

These detailed staffing plans will both inform and be informed by several agency-level workforce plans that will be focused on the needs over the next four years in specific topic areas: recruiting, employee development, diversity and succession planning. These plans will provide an aggregate cross-agency view of action plans needed to close the FTE needs and skill gaps identified in this report. These plans will be updated and published to fit the schedules that these plans serve (e.g., the recruiting plan is usually done in the late summer).

Additionally, BPA continues to plan to continue the use of Voluntary Early Retirement Authority and Voluntary Separation Incentives to achieve the skills mix and knowledge base identified above. In FY05, BPA received authority to use both VERA and VSI, with 37 employees leaving the agency. BPA has opened a new VERA/VSI window, with employees eligible to apply through December 2, 2005. BPA will be seeking additional authorities for the FY06-08 time frame to accommodate consolidation and streamlining of functions based on on-going and planned efficiency reviews. Information regarding BPA's current VERA/VSI opportunities can be found at:http://webip1/EBR/personnelservices/hrupdate.htm.